AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-7 (Canceled)

8. (Currently Amended) A branched polyolefin comprising:

(i) recurring units derived from at least one olefin selected from olefins of 2 to 8 carbon atoms, and

(ii) recurring units derived from a vinyl-terminated macromonomer comprising 50 to 100 % by mol of recurring units derived from ethylene and 50 to 0 % by mol of recurring units derived from an olefin of 4 to 8 carbon atoms, having a weight-average molecular weight of ~~600 to 3,500~~ more than 1,400 and 3,100 or less and having less than 0.1 methyl branch, as measured by ^{13}C-NMR, based on 1,000 carbon atoms.

Claims 9-10 (Canceled)

11. (Withdrawn) The process for preparing a branched polyolefin as claimed in claim 12, wherein the polymerization is carried out continuously under at least two different polymerization conditions, and the polymerization includes

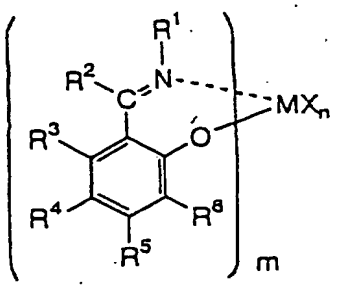
polymerization conducted under such condition that the yield of a polymer produced by the transition metal compound (B) becomes higher than the yield of a polymer produced by the transition meal compound (A) and

polymerization conducted under such conditions that the yield of a polymer produced by the transition metal compound (A) becomes higher than the yield of a polymer produced by the transition metal compound (B).

12. (Withdrawn) A process for preparing a branched polyolefin, comprising polymerizing at least one olefin selected from olefins of 2 to 20 carbon atoms using an olefin polymerization catalyst comprising:

(A) a transition metal compound containing a ligand having cyclopentadienyl skeleton,

(B) a transition metal compound represented by the following formula (I):



(I)

wherein M is a transition metal atom of Group 4 to Group 5 of the periodic table, m is an integer of 1 to 2, R^1 is an aliphatic hydrocarbon group or an alicyclic hydrocarbon group, R^2 to R^5 may be the same or different and are each a hydrogen atom, a hydrocarbon group, a hydrocarbon-substituted silyl group, an oxygen-containing

group, a nitrogen-containing group or a sulfur-containing group, R^6 is a hydrocarbon group or a hydrocarbon-substituted silyl group, n is a number satisfying a valence of M, X is a hydrogen atom, a halogen atom, a hydrocarbon group, an oxygen-containing group, a sulfur-containing group, a nitrogen-containing group, a boron-containing group, an aluminum-containing group, a phosphorus-containing group, a halogen-containing group, a heterocyclic compound residue, a silicon-containing group, a germanium-containing group or a tin-containing group, and when n is 2 or greater, plural groups indicated by X may be the same or different, and plural groups indicated by X may be bonded to form a ring, and

(C) at least one compound selected from:

(C-1) an organometallic compound,

(C-2) an organoaluminum oxy-compound, and

(C-3) a compound which reacts with the transition metal compound (A) or the transition metal compound (B) to form an ion pair.

13. (Withdrawn) The process of claim 13, wherein the branched polyolefin prepared comprises 50 to 100 % by mol of recurring units derived from ethylene and 0 to 50 % by mol of recurring units derived from an α-olefin of 3 to 7 carbon atoms and having the following properties:

the flow activation energy (Ea (KJ/mol)) and the α-olefin content (C (% by weight)) satisfy the following relation:

in the case where the number of carbon atoms of the α-olefin is 4 to 7 and $C \geq 10$ % by weight:

$$Ea \geq 0.130 \times C + 28.7,$$

in the case where the number of carbon atoms of the α-olefin is 4 to 7 and $C \geq 4.1$ % by weight:

$$Ea \geq 0.385xC+28.7,$$

in the case where the number of carbon atoms of the α-olefin is 3 and $C < 10$ % by weight (including the case where the α-olefin content is 0), and in the case where the number of carbon atoms of the α-olefin is 4 to 7 and $C < 4.1$ % by weight:

$$Ea \geq 30,$$

and

the melt tension (MT (g)) and the melt flow rate (MFR (g/10 min)) satisfy the following relation:

$$MT \leq 2.2xMFR^{-0.88}.$$

14. (Withdrawn) The process of claim 12, wherein the branched polyolefin prepared comprises 50 to 100 % by mol of recurring units derived from ethylene and 0 to 50 % by mol of recurring units derived from an α-olefin of 8 to 20 carbon atoms and having the following properties:

the flow activation energy (Ea (KJ/mol)) and the α-olefin content (C (% by weight)) satisfy the following relation:

in the case of $C \geq 4.1$ % by weight:

$$Ea \geq 0.385xC+28.7,$$

in the case of $C < 4.1$ % by weight:

$$Ea \geq 30,$$

and

the melt tension (MT (g)) and the melt flow rate (MFR (g/10 min)) satisfy the following relation:

$$MT \leq 2.2 \times MFR^{-0.88}.$$

15. (Withdrawn) The process of claim 12, wherein the branched polyolefin produced comprises,

(i) recurring units derived from at least one olefin selected from olefins of 2 to 20 carbon atoms, and

(ii) recurring units derived from a vinyl-terminated macromonomer comprising 50 to 100 % by mol of recurring units derived from ethylene and 50 to 0 % by mol of recurring units derived from an olefin of 4 to 20 carbon atoms, having a weight-average molecular weight of 600 to 200,000 and having less than 0.1 methyl branch, as measured by ^{13}C-NMR, based on 1,000 carbon atoms.